
CHAPTER 2 - LITERATURE REVIEW

2.1 Feasibility Study

Feasibility study is a research method to predict whether a project can provide benefits in the future. This feasibility study is important to ensure that the project to be carried out is really feasible and profitable. This study also helps project managers to see the feasibility of the idea to be developed and provide benefits with cost, resource efficient and provide justification for legal, technical and economic aspects, (Mukherjee & Roy, 2017).

Feasibility studies are classified into several of them:

A.Technical Feasibility

This feasibility study is closely related to technological developments. In this feasibility study, a group of engineers conducted a study of the project to be developed, especially from the technical aspect.

B.Economic Feasibility

Economic feasibility evaluation aims to determine whether the project is feasible for the company by considering the cost benefit analysis so that the risk of the money to be invested can really be managed properly (Bause, et al., 2014).

C.Legal Feasibility Study

This study prioritizes whether the project to be built is contrary to national and international legal principles. This is important so that the project can run according to plan and be efficient (Witte, 2022).

D.Operational Feasibility Study

Operational feasibility studies can be used to ensure and also take decisions whether the proposed method is feasible and meets all types of business needs.

E.Scheduling Feasibility Study

This feasibility study is part of a study to provide certainty whether it fits the planned timeline. timeline is the most important part of a process to ensure that the project will be run efficiently (Myasnikov, et al., 2012).

2.2 Customer Loyalty

Customer loyalty is a condition where customers make purchases of certain brands repeatedly because the brand is what customers want and provides recommendations to other customers to buy the same product and it is difficult to switch to other products (Purwati, et al., 2020).

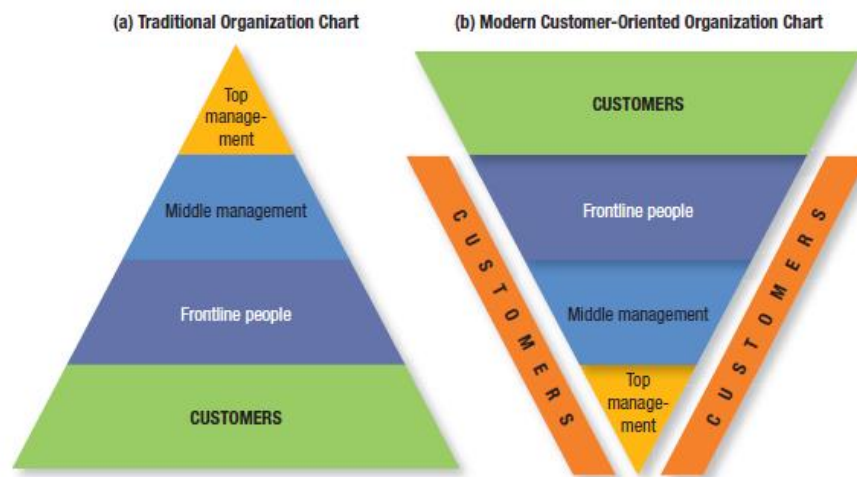


Figure 2. 1 Organization Style

As illustrated in the chart above that in the modern era customers are in the top positions. An important position for frontliners to always meet and serve customers so that customers are satisfied with the products we sell. Middle managers will provide full support for the performance of frontliners so that service to customers can really be run well. At the bottom layer is Top Management whose task is to fully support middle management (Kotler & Keller, 2016)

Trust is the most important part for customers to grow in the products we sell. Brand loyalty is a deeply held commitment to consistently repurchase or resubscribe for

desired products or services in the future so as to impact the same brand repeatedly, even though situational influences and marketing efforts have the potential to lead to behavior change. (Luarn & Lin, 2003)

2.3 Customer Satisfaction

Customer satisfaction is the behavior exhibited by customers after making a purchase of a product as well as in return for adequate or inadequate sacrifices they make as part of the customer experience. (Song & Yan, 2006).

Customer satisfaction is a feeling of pleasure or disappointment that arises after comparing the perception / impression of the performance of a product with its desires. Customers become dissatisfied if the experience they get is not as expected. Customer satisfaction is also an evaluation of the minimum purchased product equal to expectations or even exceeding expectations. Consumers will make perceptions of the products purchased (Prasetio, 2012).

2.4 After Sales Services

After-sales service is important for customers to get convenience in post-purchase service of a product. After-sales service is part of a marketing strategy in establishing the best relationship with customers so that it does not end after the sale. In addition, the quality of after-sales service is also important to note (Kurniawan & Lubis, 2013). After sales service is all supported conduct to customer after the product either unit, part and services has already been purchased. This service used as part of a business strategy to get appreciation from customers in the form of customer satisfaction. (Ariyanti & Salsabilla, 2021)

2.5 Revenue

A Company's revenue is an inflow of assets or an increase in assets can also be part of the settlement of customer or business entity obligations from the delivery of goods, services, or other assets as part of the Company's business (EFILIA, 2014).

2.6 Cost

Cost is everything that is done to carry out the production process of goods and services expressed in units of currency based on prices prevailing in the market both that have occurred and will occur. Production costs are the costs needed to obtain raw materials from suppliers and convert them into semi-finished goods or finished goods to be sold in the market. (Longdong, 2016). Cost is an exchange rate incurred to guarantee the benefits of a product (Rantung, 2014)

2.7 Net Profit

According to (Nariswari & Nugraha, 2020) Net profits margin measures the percentage of residual sales value of a product after deducting costs incurred, interest, taxes, dividends. The company gets a high net profit margin, so the company can be said to be good and healthy. The formula net profit margin as below:

$$\text{Net Profits Margin} = \frac{EAT}{\text{Net Sales}} \times 100\%$$

EAT = Earning After Tax

2.8 Gross Profits Margin

According to (Gustmainar & Mariani, 2018) Gross profit margin is a ratio obtained from the comparison of gross profit compared to sales. The greater the gross profit

margin of a Company, the better the Company's performance shows because the costs required to run the Company's operations are lower than the sales value.

$$\textbf{Gross Profits Margin} = \frac{\text{Net Sales} - \text{COGS}}{\text{Net Sales}} \times 100\%$$

COGS = Cost of Good Sold

2.9 Depreciation

Depreciation is a process of cost allocation used to increase company assets over a certain period of time in accordance with the estimated age of these assets. The allocation of costs is carried out by charging in accounting calculations during the economic life period. (Kantianis, 2015)

2.10 Cash Flow

According to (Leland Blank & Anthony Tarquin, 2014) that cash flow is the estimation of the flow of funds in (revenue) and flow of funds out (cost) in a certain period. Cash flow can be used to identify whether the business we run is profitable or even loss-making. A positive cash flow indicates that the business is profitable and it is said that the business is healthy.

2.11 Profitability Index

In running an investment, the profitability index is the key to evaluating a project. PI measures the relationship between net profit and initial investment cost, thus helping in determining the feasibility of the project to be carried out (Armênio de Souza Rangel1, 2016).

Untuk menghitung PI bisa menggunakan formula:

$$\textbf{PI} = 1 + \frac{\textbf{NPV}}{\textbf{P}}$$

PI = Profitability Index

NPV = Net Present Value

P = Initial Investment Cost

2.12 WACC

According to (Fernandez, 2007) Weighted Average Cost of Capital (WACC) is the average weight of the cost of capital or in another sense the discount rate used in the Company's financial system. Companies that can generate profits (rate of return) above WACC then the project is considered profitable. WACC calculations are also guided by a correct assessment of tax protection. WACC can be calculated by this formula:

$$WACC = \frac{E}{V} \times Re + \frac{D}{V} \times Rd \times (1 - T)$$

WACC : Weighted Average Cost of Capital

E : Equity

D : Debt

V : Total Value (E + D)

Re : Expected return

Rd : Interest rate

T : Tax

2.13 NPV (Net Present Value)

According to (Bora, 2015) NPV is a method used to analyze the investment that we will spend whether it will be profitable or detrimental in a certain period of time. In this case, NPV will take into account the present value of all cash inflows and the present value of all cash issued. All such cash flows are taken into account the discount rate. The formula of NPV as follow:

$$NPV = \sum_{t=1}^n \frac{C_t}{(1+k)^t} - C_0$$

$$NPV = \left[\frac{C_1}{(1+k)} + \frac{C_2}{(1+k)} + \frac{C_3}{(1+k)} + \dots + \frac{C_n}{(1+k)} \right] - C_0$$

NPV : Net Present Value

C_t : Annual Cash Flow in period of time

t : Time period (year numbers)

k : Discount Factor

C₀: Initial investment (cash outflow)

2.14 Pay Back Period

According to (Bhandari, 2009) Payback period is the length of time it takes for the investment invested to generate enough cash flow to return the initial investment that we invested. Payback period can also be used to evaluate the investment we spend to run a project. The faster the rate of return, the better of investment. The formula of payback period can be calculated as follows:

$$\text{Payback Period} = \frac{\text{Initial Cost}}{\text{Cash Flow}}$$

2.15 IRR

According to (Patrick, 2016) Internal Rate of Return is the discount rate which is the amount of net present value of cash equal to zero. It can also be interpreted that if the NPV of a project is zero at the specified discount rate. IRR can also be interpreted as an internal rate of return where the amount of discounted cash inflows equals the amount of discounted cash outflows (Bora, 2015). According to (Hendina Pratiwi1, 2020) the formula of IRR as follow:

$$IRR = i_1 + \frac{NPV}{NPV - NPV'} \times (i' - i_1)$$

- IRR : Internal Rate of Return
- i_1 : Discount rate resulting in positive NPV
- i' : Discount rate resulting in negative NPV
- NPV : Net present value positive
- NPV' : Net present value negative

2.16 Most Related Research

Table 2. 1 Most Related Research

Authors	Year	Challenge	Source	Country	Industry	Findings
Dr. Balaram Bora	2015	COMPARISON BETWEEN NET PRESENT VALUE AND INTERNAL RATE OF RETURN	International Journal of Research in Finance and Marketing	Srikakulam Dist, A.P(INDIA)	General Industry	1. Strenght & Weaknes of NPV & IRR Methode 2. Formula of NPV & IRR
Khalid Hyari & Amr Kandil	2009	Validity of Feasibility Studies for Infrastructure Construction Projects	Jordan Journal of Civil Engineering	Ames, Iowa 50011	Construction	1. Structure of feasibility study 2. Several activity to Improve validity of
Sawsan Rasheed Mohammed, Hafeth I. Naji & Rouwaida Hussein Ali	2019	Impact of the Feasibility Study on the Construction Projects	2nd International Conference on Sustainable Engineering Techniques	Baghdad, Iraq	Construction	1. Impact of neglect of feasibility study 2. Old feasibility methode
Momin Mukherjee & Sahadev Roy	2017	Feasibility Studies and Important Aspect of Project Management	International Journal of Advanced Engineering and Management	Arunachal Pradesh, India	General Industry	1. Clasify of feasibility study 2. Benefit of feasibility study
Hendina Pratiwi, Rita Nurmali, Noer Azam Achsani, Mohamad Syamsul Ma'arif, & Amzul Rifin	2020	Studi Kelayakan Pendirian Kantor Cabang Baru PT. XYZ di Provinsi Kalimantan Timur	Jurnal Studi Manajemen dan Bisnis	Indonesia	Construction	1. Financial analysis by quantytative approach 2. Calculation data by NPV and IRR approach 3. Result research both financial & non financial